

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 12/02/99

Date Received: 11/18/99

Project: Metro Self Monitor Grab-PO# M63061

Date Samples Extracted: 11/18/99

Date Extracts Analyzed: 11/24/99 & 11/30/99

**RESULTS FROM THE ANALYSIS OF THE WATER SAMPLE  
FOR CHROMIUM, COPPER, NICKEL, ZINC  
USING METHOD 6010**

**Samples Processed Using Method 3005A**

Results Reported as mg/L (ppm)

<u>Sample ID</u>	<u>Chromium</u>	<u>Copper</u>	<u>Nickel</u>	<u>Zinc</u>
M63061	0.53	0.56	0.62	0.09
Method Blank	<0.05	<0.05	<0.05	<0.05

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**QUALITY ASSURANCE RESULTS  
FOR TOTAL METALS BY  
INDUCTIVELY COUPLED PLASMA (ICP)  
(METHOD 6010)**

Laboratory Code: 911067-01 (Duplicate)

Analyte	Reporting Units	Sample Result	Duplicate Result	Relative Percent Difference	Acceptance Criteria
Chromium	mg/L (ppm)	0.26	0.26	0	0-20
Copper	mg/L (ppm)	0.53	0.59	11	0-20
Nickel	mg/L (ppm)	0.28	0.31	10	0-20
Zinc	mg/L (ppm)	0.14	0.17	19	0-20

Laboratory Code: 911067-01 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	% Recovery MS	% Recovery MSD	Acceptance Criteria	RPD
Chromium	mg/L (ppm)	5	0.26	92	101	80-120	9
Copper	mg/L (ppm)	5	0.53	95	105	80-120	10
Nickel	mg/L (ppm)	10	0.28	91	98	80-120	7
Zinc	mg/L (ppm)	5	0.14	92	106	80-120	14

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	% Recovery LCS	% Recovery LCSD	Acceptance Criteria	RPD
Chromium	mg/L (ppm)	5	105	107	80-120	2
Copper	mg/L (ppm)	5	104	107	80-120	3
Nickel	mg/L (ppm)	10	103	104	80-120	1
Zinc	mg/L (ppm)	5	102	105	80-120	3



**FRIEDMAN & BRUYA, INC.**

**ENVIRONMENTAL CHEMISTS**

James E. Bruya, Ph.D.  
Charlene Jensen, M.S.  
Bradley T. Benson, B.S.  
Kurt Johnson, B.S.

3012 16th Avenue West  
Seattle, WA 98119-2029  
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December 2, 1999

**DUPLICATE COPY**

**INVOICE #99ACU1202-1**

Accounts Payable  
Alaskan Copper Works  
628 South Hanford St.  
Seattle, WA 98134

RE: Project Metro Self Monitor Grab-PO# M63061: Results of testing  
requested by Gerry Thompson for material submitted on November 18, 1999.

1 water sample analyzed for  
Chromium, Copper, Nickel, and Zinc  
using Method 6010 @ \$80 per sample

\$ 80.00

Amount Due .....

\$ 80.00

PLEASE NOTE: As a convenience for our valued clients, we can accept credit cards (VISA, MasterCard or government purchasing cards) for payment on our invoices. Please contact our office if you would like to take advantage of this service.

FEDERAL TAX ID (b) (6)

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e-mail: fbi@isomedia.com

December 2, 1999

Gerry Thompson, Project Manager  
Alaskan Copper Works  
628 South Hanford St.  
Seattle, WA 98134

Dear Mr. Thompson:

Included are the results from the testing of material submitted on November 18, 1999 from your Metro Self Monitor Grab-PO# M63061 project. Any samples that may remain are currently scheduled for disposal in 30 days. If you would like us to return your samples or arrange for long term storage at our offices, please contact us as soon as possible.

We appreciate this opportunity to be of service to you and hope you will call if you should have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC..



Dianne C. Hurt  
Project Manager

Enclosures  
ACU1202R.DOC